LOUISIANA'S ALLIGATOR MANAGEMENT PROGRAM

2005-2006 ANNUAL REPORT

FUR & REFUGE DIVISION

presented to

HOUSE AND SENATE NATURAL RESOURCES COMMITTEES

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Introduction

The Louisiana Department of Wildlife and Fisheries (Department) manages the American alligator (*Alligator mississippiensis*) as a commercial, renewable natural resource. The Department's sustained use program is one of the world's most recognizable examples of a wildlife conservation success story. Louisiana's program has been used as a model for managing various crocodilian species throughout the world. Since the inception of the Department's program in 1972, over 700,000 wild alligators have been harvested, over 5.2 million alligator eggs have been collected, and over 2.7 million farm raised alligators have been sold bringing in millions of dollars of revenue to landowners, trappers and farmers. Conservative estimates have valued these resources at over $495,000,000, providing significant, direct economic benefit to Louisiana.

This report, per R.S. 56:279 (E), provides an historical perspective; outlines the basis and philosophy of the Department's management program; reviews the federal government's oversight and approval role for management of the alligator in the United States; discusses wild, farm and nuisance alligator programs; lists research activities; and reviews the revenue and expenditure information associated with the management program and the Louisiana Alligator Resource Fund. A separate report, furnished by the Department, details the activities and expenditures of the Fur and Alligator Advisory Council.

Historical Perspective

Alligators have been used commercially for their valuable leather since the 1800s. This harvest was generally unregulated throughout the 1900s, until a gradual population decline resulted in severely reduced harvests in the early 1950s. In 1962, the alligator season in Louisiana was closed, and research studies, focusing on basic life history factors, were undertaken which led to development of a biologically sound management program. Of tremendous importance was the establishment of a rigorous survey method to estimate and monitor population trends.

From 1962 through August 1972, alligators were totally protected. During this time a myriad of state and federal laws regulating harvest distribution and allocation of take, methods of harvest and possession, transportation and export of live alligators, alligator skins and their products was enacted. Similarly, in 1970 the Louisiana legislature recognized that the alligator's value, age at sexual maturity, and vulnerability to hunting required unique consideration and passed legislation providing for a closely regulated experimental commercial harvest.

The goals of the Department's alligator program are to manage and conserve Louisiana's alligators as part of the state's wetland ecosystem, provide benefits to the species, its habitat and the other species of fish and wildlife associated with alligators. The basic philosophy was to develop a sustained use management program which, through regulated harvest, would provide long term benefits to the survival of the species, maintain its habitats, and provide significant economic benefits to the citizens of the state. Since Louisiana's coastal alligator habitats are

primarily privately owned (approximately 81%), our sustained use management program provides direct economic benefit and incentive to private landowners, and alligator hunters who lease land, to protect the alligator and to protect, maintain, and enhance the alligator's wetland habitats. One of the most critical components of the management program was to develop the complex set of regulations which required individual applications for each property to be considered for tag allocation, landowner permission, proof of ownership and detailed review of habitat quality related to alligator abundance, all of which combined to equitably distribute the harvest in relation to population levels.

During the period of total protection (1962-1971) alligator populations increased quickly and by 1972 the Department was ready to initiate its new sustained use management program. On September 5, 1972 the alligator season was reopened in Cameron Parish and a total of 59 hunters harvested 1,350 alligators. The season was expanded to include Vermilion Parish in 1973, Calcasieu Parish in 1975, all nine coastal parishes in 1979 and statewide in 1981 (Table 1). In 2005, over 31,000 wild alligators were harvested by over 1,930 commercial license holders.

Oversight by the U.S. Fish and Wildlife Service

Five years after Louisiana closed the alligator harvest season, the alligator was listed on the federal Endangered Species Act in 1967. At this time the alligator was considered an endangered species throughout its range. In March of 1974, Louisiana petitioned the Secretary of the Interior, requesting that populations of the alligator in Louisiana be removed from the list of threatened and endangered species in Cameron, Vermilion and Calcasieu Parishes. In subsequent years, similar petitions sought to reclassify the alligator, first in the nine coastal parishes in 1978 and then statewide in 1981. Each of these petitions was based on results of detailed scientific study and the demonstrated success of the early harvest programs.

Export of alligator skins and products out of the United States is regulated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This treaty, which became effective in 1975, regulates the international trade in protected species; its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The U.S. Fish and Wildlife Service (USFWS) administers CITES requirements and controls for the United States. The species covered by CITES are listed on one of three Appendices, according to the degree of protection needed by each species. Currently, the alligator is listed on Appendix II of CITES, because of the similarity of their appearance to other crocodilians that are truly endangered or threatened.

In order to fulfill CITES requirements, the USFWS through a series of rulemakings, has developed a complex set of requirements that the individual states, including Louisiana, must comply with in order to be granted export approval for harvested alligators skins and products. The most critical component in these requirements is that the Department must certify, on an annual basis, that the harvest programs we administer will not be detrimental to the survival of the species. The "no detriment" finding is predicated on our assessment of the current condition of the alligator population, including trends, population estimates or indices, data on total harvest and harvest distribution and habitat suitability evaluation. Additionally, the management

program must provide for a rigorously controlled harvest with calculated harvest level objectives. All alligators and eggs harvested must be taken from specifically identified properties and all hides individually tagged (with approved, serially marked CITES export tags furnished by the USFWS). The USFWS requires strict accountability for each tag allocated to the harvester, requiring all unused tags be returned at the close of the season.

Wild Alligator Management Program

In 1970, the Louisiana State Legislature (Act 550) gave the Department of Wildlife and Fisheries full authority to regulate the alligator season in Louisiana. Since that time, the Department has annually inventoried alligator nest production throughout coastal Louisiana in order to assess the status of alligator populations (Figure 1). Results of annual alligator nest surveys are compiled to provide estimates of nest density (acres per nest) by parish and by habitat type (brackish, intermediate, or fresh). Private and publicly owned lands (State and federal Refuges, and Wildlife Management Areas) are compiled separately.

In 2005-2006, over 3,500 miles of transects were flown, surveying 150,000 acres of wetland habitat. The sampling intensity covers approximately 3.4% of 2.4 million acres of private coastal wetlands, and 4.2-10.4% of some 567,000 acres of public coastal wetlands. During summer 2005 we estimated that 41,392 alligator nests were present in the coastal marsh habitat, a slight decrease from the previous year.

Nest density and alligator population estimates are combined with a detailed review of harvest parameters and a general assessment of environmental factors observed during each survey to determine final harvest level objectives. Over 50 individual alligator harvest quotas are developed annually in order to distribute the harvest in relation to alligator abundance in the various habitats across the state. A listing of the 2005 wild alligator harvest quotas is appended as Exhibit 1. In the best habitat one alligator is harvested per 60 acres, while in the poorer

habitats one alligator is harvested per 500 acres. Alligator hunters annually submit a description of the property on which they have permission to hunt. The Department assesses the habitat quantity and quality and determines the number of alligators that can be harvested by each hunter. This methodology ensures that alligators are harvested in proportion to their population levels and that the harvest will not negatively impact populations at any location. The currently approved quota system represents an allowable wild alligator harvest, which coupled with the state authorized wild alligator egg harvest program represents a level of population utilization currently unparalleled in the world of crocodilian management.

Under this sustained use alligator program, over 700,000 wild alligators have been harvested since 1972 (Table 2). The annual harvest takes place in September to specifically target the adult males and immature segments of the alligator population. Adult females, which typically inhabit interior marshes in September, would be more susceptible to harvest if the season was scheduled during the spring or summer. During the 2005 wild season, a total of 27,623 alligators were harvested, averaging 7.25 feet in length, with an estimated value of $9.8 million. Due to the impacts of Hurricanes Katrina and Rita, only 85% of the tags issued were utilized.

In 1999, the Department initiated the "Bonus Alligator Harvest Program" designed to better utilize alligators in the 4'-5' size classes. Starting in 1999, trappers were issued an additional quantity of "bonus" tags to be used on alligators less than 72 inches in length. The number of "bonus" tags issued is approximately 12% of the trapper's regular quota. In 2005, we harvested an additional 3,426 bonus alligators which averaged 5.83 feet in length, valued at nearly $1.04 million.

Evaluating each hunter's personal property or land owned by large private corporations and determining the acres of habitat by marsh type is very labor intensive. One piece of property may have divided interest ownership as the property was passed down from generation to generation. Property descriptions are obtained from tax assessors offices in each parish to determine exact locations and boundaries for each piece of property. Maps delineating vegetative types and ownership are use to assess the number of acres by habitat type for each land owner. In conjunction with the U.S. Geologic Survey, National Wetlands Research Center, a computer based GIS/Arc View system was developed in 2000-2001. This GIS Alligator Tag Allocation System (GATAS) involves plotting digital files of each landowner's property, with superimposed vegetative type delineations. Alligator program staff began plotting land owner information during 2002 and by 2005 approximately 90% of the wetlands enrolled in the wild harvest program have been entered into GATAS. This system allows Department biologists to accurately assess habitat quality and to automatically incorporate the new marsh types/vegetative changes when new surveys are flown.

Each year the alligator program staff works closely with landowners and alligator hunters to provide assistance regarding alligator management on their respective properties. The establishment of the GATAS system resulted in plotting of property boundaries which will further our ability to assess alligator habitat quality and allow us to relay that detailed information to each respective landowner. We have provided numerous habitat base maps to

landowners for their use in participation of both the wild and alligator egg harvest programs. Harvest reports summarizing average lengths and size class frequency distribution of harvested alligators are frequently provided and are available for every participant in the wild harvest program.

Farming/Ranching Program

Early alligator farms in Louisiana were generally small, family owned operations; and often run more as a hobby/curiosity than a commercial enterprise. Extensive studies done by Department biologists showed alligators could be efficiently cultured and grown in captivity. Egg ranching (collection of alligator eggs from the wild) proved more economical and successful than captive breeding; private egg collections were first permitted, on a limited basis, in 1986.

Louisiana's alligator ranching program increased dramatically between 1986 and 1990. To ensure wild alligators were not depleted as a result of egg collections, and to ensure future recruitment of sub-adult alligators to the breeding population, the Department now requires a quantity of juvenile alligators equal to 14% of the eggs hatched by the rancher be returned to the wild within two years of hatching.

A variable return rate was established based on the estimated survival rates for wild juvenile alligators. Using the relationship of survival between size classes, we extrapolated return rates based on expected survival rates for alligators from 36 to 60 inches. More alligators must be returned if the average total length is smaller, and fewer animals are required if the average length is larger. Close monitoring of the survival of these alligators will continue for many years.

Enormous effort has been made by the Department to monitor the fate of the alligators released to the wild. In 2005-2006 we released a total of 40,999 farm raised alligators into the wild to maintain wild alligator populations. Each alligator released is measured, sexed, tail-notched, tagged and recorded prior to release to the same area where the farmers had originally harvested the eggs. Although it is costly to the ranchers to fulfill the "returns to the wild" obligation, it is an integral necessity of the program, considering the large number of eggs collected. In 2005, a record number of wild alligator eggs (507,315) were collected (Table 3).

Currently there are 56 licensed farms in Louisiana (Figure 2). However, the inventory on farms is far higher now (601,809 in December 2005) than when there were over 120 farms (318,000 alligators in December 1991). During the 2004 tag year (September 2004 through August 2005) a total of 296,102 farm alligators were harvested, averaging 3.9 feet in length. The total estimated value of these alligators was $33.4 million. Although those data are still being compiled as skins are exported out of Louisiana, we estimate that in the 2005 tag year nearly 256,000 farm skins will be harvested.

In order to better meet the needs of the alligator industry, the Department sponsors meetings for all segments of the industry (farmers, hunters, and landowners) which gives the industry participants an opportunity to prioritize the current issues facing the state's alligator program. In addition to the on-site visits, the staff communicates with farmers on a regular basis to schedule releases, hide inspections, live animal inspections, coordinate farm transfers, alligator egg collection permits, issue and follow up on CITES tags and other paperwork.

Multiple research contracts were administered by the program staff with the LSU and University of Florida Veterinary Schools. On numerous occasions the staff arranged for transportation of sick or problem alligators and sample skins from farms to the LSU and Florida Vet Schools for necropsy. One of these contracts provides for the availability of a veterinarian to respond to farm related problems. Farmers know they can contact the program staff or Dr. Nevarez and get a rapid response to their problem. We arranged collection and delivery of alligator research specimens to numerous graduate students and university faculty. Despite setbacks from Hurricane Rita, numerous wildlife groups, including university and graduate students, were hosted at Rockefeller Wildlife Refuge for educational purposes; as were professional representatives from domestic and international organizations such as CITES, IAFWA, and others. Presentations were made at various civic organizations and captive alligators were often loaned out for educational purposes. Several night counts were made on private land holdings in southwest Louisiana to gather data to develop 2006 alligator harvest quotas.

An alligator program newsletter entitled ***"Gator Notes"*** was first developed in April 2005, and will be mailed to all alligator industry personnel periodically. The newsletter provides a description of current alligator program activities, harvest statistics, research activities and

reminders for due dates for hunting applications, alligator egg collection permits, license renewals and reporting requirements.

Nuisance Alligator Program

The Louisiana Department of Wildlife and Fisheries operates a statewide nuisance alligator control program. The nuisance program is designed to remove problem alligators in order to avoid potential human/alligator conflicts. Through the process of nuisance alligator hunter appointments and annual renewals the Department maintains a statewide network of qualified nuisance alligator hunters. Nuisance alligator complaints are phoned into various Department offices, where complaints are recorded and then forwarded to a nuisance alligator hunter in the vicinity of the complaint. Nuisance hunters respond promptly and catch and remove the alligator as deemed necessary. Hunters are allowed to harvest the nuisance alligator and to process the meat and skin of the alligator for commercial sale. This process provides for immediate response to the problem alligator and for payment to the nuisance alligator hunter, thereby minimizing the program operating costs to the Department. During 2005-2006, a total of 62 nuisance alligator hunters were enrolled in the program; they responded to an estimated 6,000 complaints and harvested approximately 2,900 alligators.

Research Activities

The following list provides a summary of the various research and monitoring projects that the alligator program staff conducted and/or participated in during the 2005-2006 fiscal year.

Monitoring

1. Evaluation of survival, growth, and reproduction in farm released alligators

This activity involves numerous projects related to survival analysis, growth and reproductive success (farm-released vs. native wild). Due to the recent reduction to the 14% release rate, it is imperative to monitor survival closely. Although some growth information has been published we plan to evaluate growth rates in more detail; we now have "retraps" that were captured 10-15 years since release, and this is undoubtedly one of the largest mark-recapture projects currently in progress. Staff from the LSU Department of Experimental Statistics assists with annual evaluation of survival based on farm “retraps” recovered in September harvests. We are also evaluating dispersal of animals from release sites. LDWF staff displacement due to Hurricane Rita in September 2005 limited progress on this project due to delays in data entry.

2. Coastwide nest survey

The annual coastal nesting survey is essential for monitoring our alligator population, and is used annually to determine wild alligator and wild alligator egg harvest quotas (for the adult harvest each September as well as egg ranching quotas). This is an integral part of our required “finding of no detriment” needed for export authority. This survey will be of particular interest in

summer 2006, to evaluate the impact of Hurricanes Katrina and Rita, followed by the worst drought in 111 years that occurred in fall/winter/spring of 2005-06.

3. Evaluation of statewide harvest program

We continue to closely analyze size class frequency distribution, average size, sex ratios, etc. for alligators harvested each year. This project, coupled with coastwide nest survey will be continued as long as a harvest program is in place. Data generated from these projects provides the basis for evaluating the impact of our current harvest strategies, and for establishment of annual wild harvest quotas.

4. Evaluation of alligator nest density

LDWF biologists work with selected cooperating alligator farmers to gain access to their GPS data from annual egg collections. This study will facilitate comparisons between our coast wide nest survey and estimates of nest density as recorded by the farmer during egg collections. Some farmers have advised staff of reduced nest production on selected wetlands; this study will allow us to evaluate nest distribution and density changes over time. Data from 2005-2006 will be particularly important for comparisons due to the massive impacts of Hurricanes Katrina and Rita in late 2005.

5. Hide quality analysis

Staff continues to monitor wild alligator skin quality. In spring 2006 we analyzed data from recent years as per industry requests, and found results very similar to the past findings; in some areas hide quality improved and the overall impact of farm-releases on the total wild harvest grade quality was minimal. Drought seem to have a marked effect on hide quality in any given year due to concentration of alligators in reduced habitat area.

6. WNV (West Nile Virus)

The Department, in conjunction with LSUSVM, continues to monitor occurrence of WNV on alligator farms in Louisiana. Initial mortality related to WNV occurred in fall/winter 2003. Aggressive mosquito control on farms has reduced on farm mosquito populations and seems to have reduced the incidence of WNV in 2005-2006. Studies are underway to determine if WNV exposure is a predisposing factor in development of “PIX/LPSA” skin lesions.

Contracts

1. DNA studies: evaluate multiple paternity in alligators (Dr. Travis Glenn)

This study will provide a better understanding of alligator reproduction. Determining if multiple males father a single clutch of eggs or if a single male breeds with several females may have wild harvest quota implications. We attempted to collect "repeat" samples (several “retraps” were obtained in 2004 and 2005), to determine if pair bonds exist in wild alligators. We

hoped to evaluate more male samples, to see if very large males in the study site father several clutches in repeated years. We still have additional samples to analyze and would have liked to expand the study for repeat nesting females and further evaluate the male contribution; Dr. Travis Glenn is at one of the few labs with capability for this complex analysis, and we established a contract with him in late 2003 for this work; the contract ended on June 30, 2006. We may be able to determine if there are genetic reasons for "superior" clutches of hatchlings, or genetic defects causing common abnormalities (scoliosis, twisted tails, etc.). Unfortunately Hurricane Rita and the subsequent drought made collections from the Rockefeller study site impossible in June 2006. However, we were able to provide Dr. Glenn with some samples from a very large clutch in North Louisiana to evaluate some of the questions above.

2. PIX/LPSA etiology - LSUSVM (Dr. Mitchell, Dr. Nevarez)

This project will determine if West Nile virus (WNV) is directly implicated in the occurrence of PIX/LPSA skin disease in alligators (Funding from USDA/APHIS)

3. Evaluate treatment methods to control fungal-PIX (Dr. Paul Cardeilhac)

Prior work by Dr. Paul Cardeilhac at the University of Florida's School of Veterinary Medicine suggests PIX may be caused by a fungal organism (H. werneckii). This project will evaluate treatment methods using copper and chlorine to control fungal-PIX (funding from USDA/APHIS).

4. Diagnostic services - LSUSVM (Dr. Nevarez)

Dr. Nevarez and Dr. Mitchell are on contract to conduct PIX/LPSA research and to provide diagnostic services as needed for the alligator industry. Farmers may consult with Dr. Nevarez at any time for assistance with any alligator husbandry or disease issue. The work conducted by Dr. Nevarez led to the discovery of West Nile Virus in some alligator farms.

5. LSU Experimental Statistics

The LSU Department of Experimental Statistics is under contract to provide technical statistical expertise for numerous alligator projects; most importantly the evaluation of survival of farm-released alligators, population trends from nesting survey data, and more recently hide grade/length correlations.

6. Nutria/Zinc phosphide (non-Alligator Resource Fund)

A pilot study was conducted in October/November 2004 to see if this chemical (if used as a nutria control agent) would have adverse effects on alligators that might consume the nutria carcass. At massive (pathological) doses alligator mortality was significant, a follow up study in July – September 2005 using physiological doses showed far lower mortality and further studies may be warranted.

7. Toxicology

We collaborated with Dr. Val Lance and his colleagues to analyze reproductive failure in captive adult alligators and a manuscript on these findings was published. Samples collected at Rockefeller are being analyzed by the veterinary pathology group at SDZS. Tissue lead levels were being evaluated by a graduate student (Master's degree completed) and the lead manuscript written by Dr. Lance with a Department biologist as a co-author was published. Another manuscript on laser ablation ICP-MS analysis of the microdistribution of lead in alligator femora was prepared for publication and accepted. We have a new contract with Dr. Lance for further work to determine if any environmental contaminants (heavy metals) exist in wild alligators; we anticipate documenting low levels or none detected. Yolk/embryo samples for this project were collected in summer 2005, and tissue samples from wild harvested alligators were collected in September 2005. Additional sampling will be done in September 2006.

8. Hurricane effects on alligator physiology

We initiated a new study to determine the effects of high salinities seen in the marsh after Hurricane Rita, by collecting blood samples from wild alligators to measure stress hormone (plasma corticosterone) and electrolytes; as well as general body condition and behavior of the alligators. Superimposed drought in winter of 2005-2006 will make interpretation of results difficult. A manuscript was prepared and presented at the IUCN's Crocodile Specialist Group Meeting in Montlimar, France in June 2006.

Other Research

1. Leptin studies

We initiated a new study with Dr. Karen Sweazea and Dr. Eldon Braun in spring 2006 to evaluate leptin, a hormone associated with digestion that is an indicator of adiposity. This may be helpful information for alligator farmers, as alligator hides are sold based on belly width and this information may help us enhance body condition in alligators.

2. West Nile Virus surveillance in wild alligators

While collecting samples in spring 2006 for the above project with Dr. Lance, we were able to obtain sufficient blood quantities to check for WNV exposure in wild alligators, in collaboration with Dr. Steve Presley and Dr. Thomas Rainwater of Texas Tech. Preliminary results are pending.

3. Ultrasound of female alligators

As part of the prior project with Dr. Lance, we began collaborating with Dr. Dave Rostal (unfunded) to do ultrasounds of female alligators, to determine if reproductive status can be confirmed by this non-invasive technique, and correlated with the plasma analysis from female alligators. This study may help refine the estimate of the proportion of the adult female population nesting each year. We have published abstracts and presented preliminary results at scientific meetings and a full paper is now being written for submission to the scientific literature.

4. Immunology/wound healing/husbandry

We are currently collaborating on projects with Dr. Mark Merchant (unfunded) to evaluate anti-microbial properties of alligator plasma. Although diseases are generally rare in alligators, this work may help on the rare occasion of disease in farmed alligators, in terms of evaluating cause and treatment options. Dr. Merchant has published several manuscripts co-authored by Department biologists on the antimicrobial activity of alligator blood; and a paper on the amoebacidal activity was recently published. We evaluated a possible complement system, which is part of the innate immune system (two manuscripts published), and we recently coordinated samples for studies on wound healing in alligators. Further studies in this area are underway. Abstracts on several of these studies were prepared for the Crocodile Specialist Group Meeting held in Montlimar, France in June 2006.

5. Telomeres as aging techniques

We investigated the use of blood telomere lengths (DNA fragments) as a tool to determine age of alligators. With collaborators at Iowa State University we submitted a manuscript for publication, which was accepted and is now “in press”. We would like to expand this study to determine how old a female alligator can be and still successfully nest in the wild.

It is unknown if female alligators become senescent or if they are able to nest at age 30, 35, 40, or 45 years. This is a less invasive technique than trying to count annular growth rings in alligator femora.

6. Nest site fidelity - using DNA "retraps"

We have found many females nest in nearly the exact same spot as in a prior year. Data collection was ongoing in 2005 for this long-term project. Prior studies have evaluated nesting spacing patterns relative to habitat/geography, but this study provides nesting data for specific tagged females over a number of years. Additional samples were collected in 2005; however Hurricane Rita prevented sampling on Rockefeller in 2006.

7. Trap evaluation

During our DNA study, we designed a new live walk-in trap for alligators. We recently published the preliminary results, and are adding 2003-2005 data on trap effectiveness, number of man-days/catch etc. Unfortunately three traps we'd constructed were lost when the storage shed was washed away in Hurricane Rita.

8. Sex ratios of hatchling alligators

We are working with Dr. Jeff Lang on a manuscript on sex ratios and temperature dependent sex determination in alligator eggs left in the wild to incubate. Field work is complete; analysis and writing will follow. This project will provide needed data on wild sex ratios which is critical to population estimation; and is part of the evaluation of sex specific survival of releases to the wild.

9. Alligator testis ultrastructure

In collaboration with Dr. Kevin Gribbins of Wittenberg University, we conducted a morphological study on the ultrastructure of the alligator testis and the cytological evaluation of germ cell development. A manuscript was accepted and published in Acta Zoologica. Additional samples for more detailed electron microscopy were collected in spring 2005.

10. Alligator dispersal

In collaboration with Dr. Val Lance, we have four years of data on alligator dispersal (caught live on Rockefeller, and subsequently harvested "off" Rockefeller). Several have migrated very long distances (20-36 miles) which is important data to consider in evaluating our farm "release to the wild" program. Additional data collected in September 2006 will help us evaluate effects of Hurricane Rita and severe drought on alligator displacement.

11. Birds as prey of alligators

We co-authored a review manuscript with Dr. Steven Gabrey noting various avian

species taken as prey by alligators.

Revenue and Expenditure Information

In recognizing that the Louisiana alligator industry is a vital aspect of Louisiana's economy and recognizing the many, varied national and international impediments to industry development, and the need to develop and maintain a total alligator conservation program, the Louisiana legislature established the Louisiana Alligator Resource Fund in 1991 (R.S. 56:279). This Act established a dedicated source of revenue intended to help defray the costs of the alligator program within the Fur and Refuge Division of the Department. The specific goals of the legislation are:

1. To provide salaries and financial support including associated indirect cost for the following positions, to provide a minimum of two full-time technical positions (biologists) and eight nontechnical positions such as computer operators, secretaries, and wildlife specialists existing within the Fur and Refuge Division of the Louisiana Department of Wildlife and Fisheries.
2. To assist with funding for law enforcement activities associated with the alligator farm industry when surplus funds are available and recommended by the Louisiana Fur and Alligator Advisory Council.
3. To assist with funding marketing programs recommended by the Louisiana Fur and Alligator Advisory Council when surplus funds are available.
4. To actively fund research on all aspects involved with alligator conservation and to develop the techniques needed to enhance the commercial alligator industry.
5. To assist in funding management of the alligator population through proper management, harvest and farm facility management.

This legislation provides all the enabling language required to establish the Louisiana Alligator Resource Fund including sources of income, investing of the fund, and expenditures from the fund. Further R.S. 56: 253 establishes the alligator hide tag fee and the alligator shipping label fee, specifies the details of collection of these fees, and establishes that these fees shall be no more than $4.00 per hide or live alligator. R.S.56:256, provides for the collection of a $0.25 severance tax on each alligator hide taken within the state. R.S. 56:279 C (1) provides that all revenues received by the state from tag fees, alligator shipping label fees, and from the severance tax on alligator skins shall be credited to the Louisiana Alligator Resource Fund. During the 2005-2006 fiscal year, $1,316,717 was deposited into the Louisiana Alligator Resource Fund. The alligator industry should be applauded for supporting these legislative endeavors to create a self-generated source of revenue to develop and maintain the state's alligator management program. Annual income and expenditure data for the Louisiana Alligator Resource Fund is reported in Table 5.

Table 6 summarizes the Louisiana Alligator Resource Fund expenditures by the alligator management program for the 2004-2005 and 2005-2006 fiscal years. Expenditures by the alligator management program totaled $929,445 in 2004-2005 and $998,529 in 2005-2006.

Salary and related benefits constituted 62% of total expenditures. Currently the alligator program staff consists of six biologists, four wildlife technicians, and two administrative specialists (Exhibit 2). Additionally, in 2005-2006 we supplemented the permanent staff with three wildlife technicians, hired as six-month restricted appointments to assist in the farm alligator release program.

Other major expenditure categories included $108,415 for various alligator research contracts, $64,214 in Operational Services (of which $45,004 was spent on helicopter rental for the annual alligator nest survey), and $84,334 for general supplies used for a multitude of daily program activities. As provided for in R.S. 56:279, the Fur and Alligator Advisory Council expended $231,781 of Louisiana Alligator Resource Funds during 2005-2006. Details of the alligator educational and technical activities approved and conducted through the Fur and Alligator Advisory Council are provided in their annual report to the Legislature.

All expenditures from the Louisiana Alligator Resource Fund are provided for in R.S. 56:279. The Department carefully approves and monitors all expenditures to ensure compliance with all legal requirements. The Department's fiscal office can produce a variety of expenditure and budget reports upon request.

Hurricane Impacts

Coastal Louisiana was impacted by two devastating hurricanes in 2005. Hurricane Katrina struck southeastern Louisiana on 29 August, and Hurricane Rita hit southwestern Louisiana on 24 September. Massive tidal storm surges inundated coastal marshes with high salinity waters across virtually the entire coast of Louisiana; which is prime alligator habitat. Some direct alligator mortality was observed; but overall long-term impact of these storms on alligator habitat remains to be seen. Direct physical damage to wetlands through scour, scrapes, erosion, and rolling has been noted, and high salinities were accentuated by lower than usual winter rainfall after the storms, which might have tempered the deleterious salinities. Effects of these storms on the 2005 wild alligator harvest were limited, as the season dates were adjusted to allow for maximum participation and resumption of infrastructure needed to conduct a successful harvest. Some short-term effects were seen on regional commercial alligator farming operations where power was lost for several weeks; however, overall farm mortality was quite limited. Blood samples were taken from wild alligators (n = 57; size range 68.6 cm to 213.4 cm total length) in February and April of 2006 to assess stress (via plasma corticosterone and electrolyte levels) due to the hurricane; although superimposed severe drought conditions developed making interpretation difficult. Annual coastal nesting surveys are scheduled for early July 2006 which will provide additional data on alligator habitat alteration resulting from these hurricanes. A record 507,000 alligator eggs were collected in summer 2005 as part of Louisiana's egg ranching program; many of these might have been lost due to flooding of eggs or direct mortality of young hatchlings had the landowners/ranchers not participated in the egg ranching program. This provides strong support for the concept of sustained use of wildlife resources, which otherwise would have been lost to natural mortality.

Habitat Concerns

One threat or potential limiting factor to Louisiana's alligator population is habitat loss. Because the vast majority of Louisiana's alligators are in the coastal parishes, saltwater intrusion and wetlands/marsh deterioration from numerous causes are very real threats. Additionally, the combined impact of Hurricanes Katrina and Rita may result in long term reduction of alligator habitat quality in coastal Louisiana.

Vast resources by numerous state and federal agencies have been expended to attempt to limit these losses. Projects to restore/enhance marshes include construction of earthen terraces (to reduce wave action and turbidity), "breakwaters" and protection levees along coastlines, and freshwater diversions. Alligators benefit directly from these efforts to maintain/enhance wetlands. The freshwater diversion projects (Davis Pond and Caernarvon) shift water from the Mississippi River in hopes of re-establishing more favorable salinity conditions for numerous fish and wildlife species. Some preliminary data suggests alligator nesting has improved in the areas enhanced by lower marsh salinity levels. It is critical that habitat changes are monitored, mapped and incorporated periodically into the alligator program. This will ensure that our harvest programs are adjusted accordingly for corresponding alligator population and habitat changes.

Summary

Louisiana's alligator management program has clearly illustrated that controlled sustained use of the species is feasible. The alligator is alive and well in Louisiana. The wild harvest has been in place over 30 years and the egg ranching program for nearly 20 years and may appear to operate unchanged every year. However, constant adaptations are made to try to improve both programs. Constant requests by user groups (farmers, egg ranchers, trappers, landowners, buyers, dealers and other industry personnel) are received and considered as the Department strives to safely manage the alligator resource to the benefit of many user groups with varied interests.

Louisiana's alligator industry is unique. It has recognized the necessity of establishing a self-generated revenue source to provide the necessary regulatory and management efforts to effectively manage the alligator resource. The Department will continue to protect the alligator resource while striving to ensure long term, sustainable harvest programs. During 2005-2006 the Department, through the use of the Louisiana Alligator Resource Fund, has worked toward achievement of the goals established by the Louisiana Legislature.

Figure 1. Louisiana Coastal Marsh Alligator Nest Production, 1970-2005

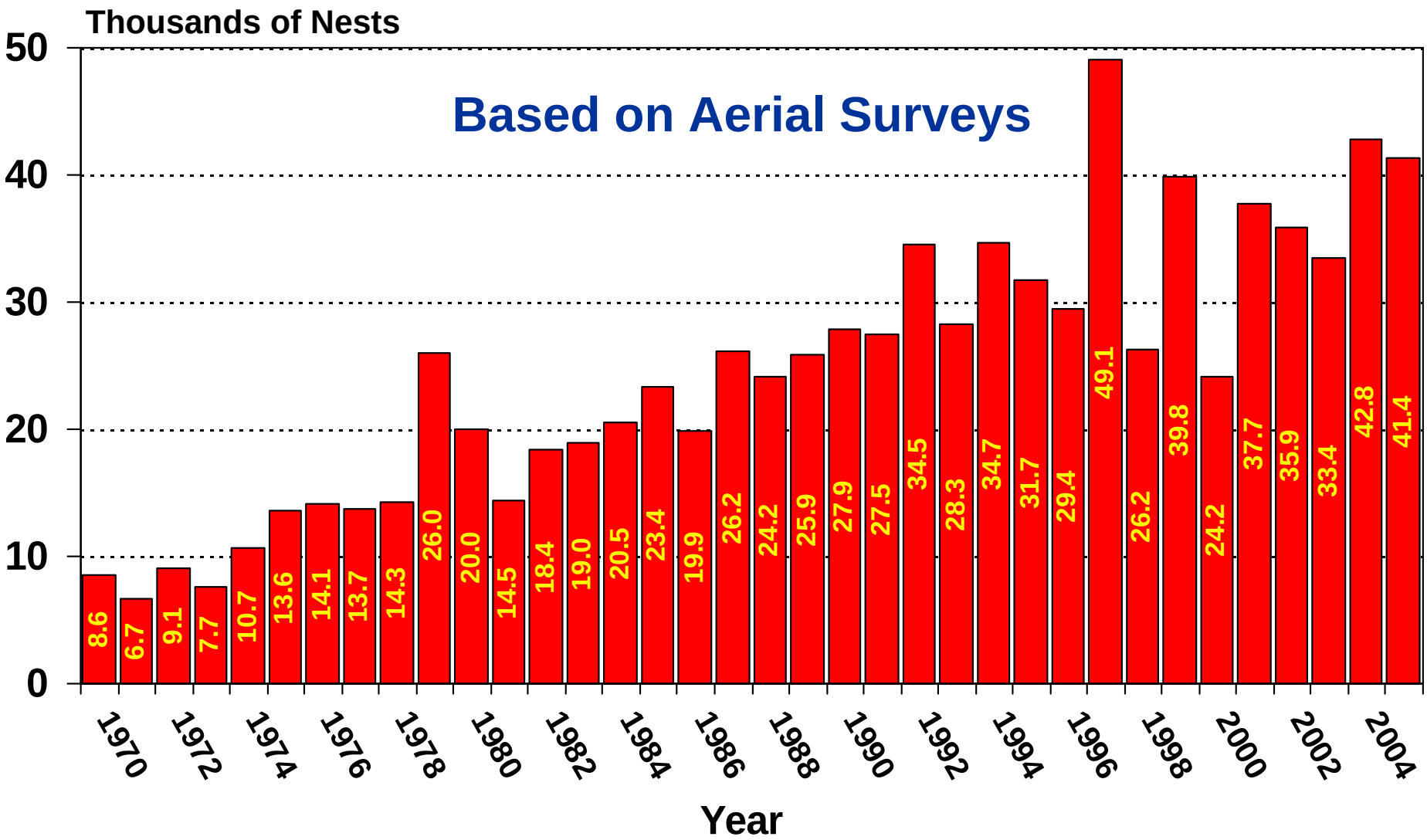

Figure 2. Louisiana Alligator Farm Inventory and Locations, December 2005

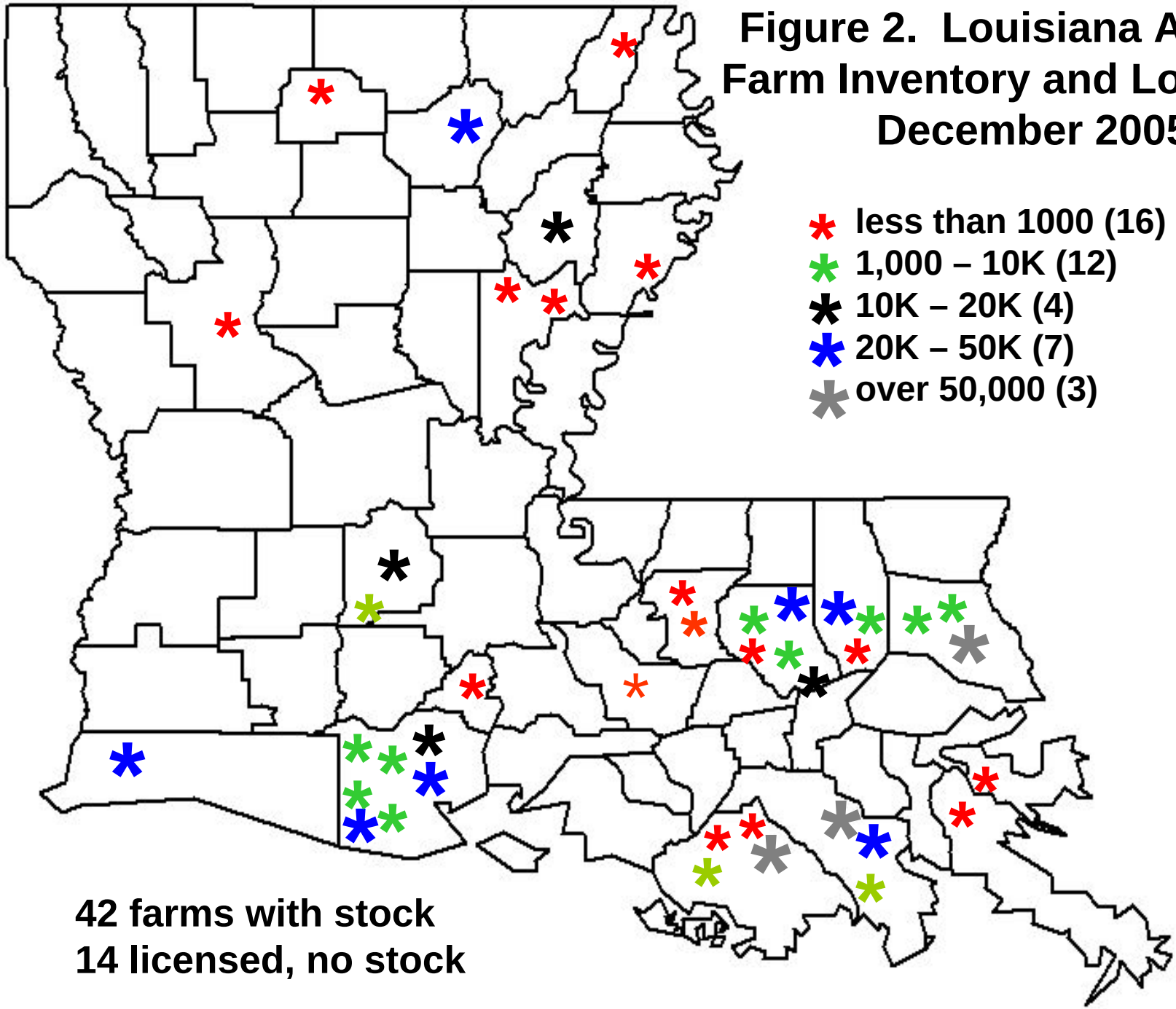

Table 1. Louisiana Alligator Season Dates, Area Open, Harvest Level and Tag Cost, 1972-2005

Year	Season Dates	No. of Days	Parishes	Tag Fee	
				Amount	Paid By
1972	5 Sept – 17 Sept	13	Cameron	$5.00 **	hunter/farmer
1973	10 Sept – 28 Sept	19	Added Vermilion	$5.00 **	hunter/farmer
1975	20 Sept – 19 Oct	30	Added Calcasieu	$5.00 **	hunter/farmer
1976	9 Sept – 8 Oct	30	No change	$5.00 **	hunter/farmer
1977	1 Sept – 30 Sept	30	No change	$5.00 **	hunter/farmer
1979	7 Sept – 7 Oct	31	Coastwide *	$5.00 **	hunter/farmer
1980	4 Sept – 4 Oct	31	No change	$5.00 **	hunter/farmer
1981	31 Aug – 30 Sept	31	Statewide	$5.00 **	hunter/farmer
1982	4 Sept – 3 Oct	30	Statewide	$5.00 **	hunter/farmer
1983	10 Sept – 9 Oct	30	Statewide	$5.00 **	hunter/farmer
1984	8 Sept – 7 Oct	30	Statewide	$5.00 **	hunter/farmer
1985	31 Aug- 30 Sept	31	Statewide	$5.00 **	hunter/farmer
1986	6 Sept – 6 Oct	31	Statewide	$5.00 **	hunter/farmer
1987	5 Sept – 5 Oct	31	Statewide	$5.00 **	hunter/farmer
1988	10 Sept – 10 Oct	31	Statewide	$2.00/tag	hunter/farmer
1989	9 Sept – 8 Oct	30	Statewide	$4.00/tag	hunter/farmer
1990	1 Sept – 30 Sept	30	Statewide	$4.00/tag	hunter/farmer
1991	31 Aug – 29 Sept	30	Statewide	$4.00/tag	hunter/farmer
1992	10 Sept – 4 Oct	25	Statewide	$4.00/tag	hunter/farmer
1993	11 Sept – 10 Oct	30	Statewide	$4.00/tag	fur dealer/shipper
1994	3 Sept – 2 Oct	30	Statewide	$4.00/tag	fur dealer/shipper
1995	2 Sept – 1 Oct	30	Statewide	$4.00/tag	fur dealer/shipper
1996	7 Sept – 6 Oct	30	Statewide	$4.00/tag	fur dealer/shipper
1997	6 Sept – 5 Oct	30	Statewide	$4.00/tag	fur dealer/shipper
1998	2 Sept – 1 Oct	30	Statewide	$4.00/tag	fur dealer/shipper
1999	1 Sept – 30 Sept	30	Statewide	$4.00/tag	fur dealer/shipper
2000	30 Aug – 30 Sept	32	Statewide	$4.00/tag	fur dealer/shipper
2001	29 Aug – 30 Sept	33	Statewide	$4.00/tag	fur dealer/shipper
2002	28 Aug – 30 Sept	34	Statewide	$2.00/tag	fur dealer/shipper
2003	3 Sept – 2 Oct	30	Statewide	$2.00/tag	fur dealer/shipper
2004	1 Sept – 30 Sept	30	Statewide	$3.00/tag	fur dealer/shipper
2005 ***	14 Sept – 30 Oct	46	Statewide	$4.00/tag	fur dealer/shipper

* Added Iberia, St. Mary, Terrebonne, Lafourche, St. Charles, Jefferson, Plaquemines, St. Bernard and St. Tammany
** Per issuance, regardless of number
*** Opening date was postponed and season was extended due to Hurricanes Katrina and Rita

Table 2. September Wild Alligator Harvest in Louisiana, 1972-2005 *

Year **	Commercial Hunters	Tags Issued	Number Taken	Percent Success	Avg T. L. in Feet	Skin Value		Meat ****	
						Avg/foot	Total	Amount (lbs)	Value
1972	59	1,961	1,350	68.8	6.92	$8.10	$75,670	***	***
1973	107	3,243	2,921	90.1	7.58	$13.13	$290,714	***	***
1975	191	4,645	4,420	95.2	7.51	$7.88	$261,570	***	***
1976	198	4,767	4,389	92.1	7.09	$16.55	$515,003	***	***
1977	236	5,760	5,474	95	7.35	$12.23	$492,061	***	***
1979	708	17,516	16,300	93	6.92	$15.00	$1,691,940	100,089	$125,000
1980	796	19,134	17,692	92.5	6.59	$13.00	$1,515,674	100,089	$125,000
1981	913	15,534	14,870	95.7	6.92	$17.50	$1,800,757	100,089	$125,000
1982	1,184	18,188	17,142	94.2	6.82	$13.50	$1,578,264	100,089	$125,000
1983	945	17,130	16,154	94.3	6.92	$13.00	$1,453,214	100,089	$125,000
1984	1,104	18,386	17,389	94.6	6.99	$21.00	$2,552,531	100,089	$125,000
1985	1,076	17,466	16,691	95.6	7.09	$21.00	$2,485,123	150,133	$675,000
1986	1,207	23,267	22,429	96	6.92	$23.00	$3,569,800	310,275	$1,395,000
1987	1,370	24,635	23,892	97	7.09	$40.00	$6,775,771	500,444	$2,250,000
1988	1,545	24,111	23,526	98	7.25	$48.00	$8,187,048	600,533	$3,000,000
1989	1,769	25,492	24,846	97.4	7.25	$50.00	$9,006,675	747,448	$3,000,000
1990	1,921	26,051	25,575	98.2	7.25	$57.00	$10,568,869	701,063	$3,000,000
1991	1,995	24,532	23,870	97.3	7.45	$32.00	$5,690,608	684,109	$2,935,000
1992	1,686	25,378	24,000	94	7.25	$23.00	$4,002,000	687,835	$2,951,520
1993	1,702	24,805	23,991	96.7	7.25	$23.00	$4,000,499	687,615	$2,889,000
1994	1,774	27,694	27,120	97.9	7.35	$37.00	$7,375,284	771,610	$3,243,000
1995	1,877	28,931	28,442	98.3	7.35	$41.00	$8,570,997	809,088	$3,400,000
1996	1,948	26,578	25,789	97	7.41	$25.00	$4,777,412	734,793	$3,967,800
1997	1,973	29,900	29,085	97.3	7.08	$18.00	$3,706,592	828,423	$4,473,000
1998	1,888	30,198	28,639	94.8	7.08	$15.00	$3,041,462	804,679	$4,350,000
1999 regular	1,902	33,279	32,097	96.4	7.17	$22.00	$5,062,981	909,398	$4,881,000
1999 bonus		3,308	3,173	95.9	5.75	$15.50	$282,794	44,335	$237,250
2000 regular	1,941	31,999	30,532	95.4	7.17	$27.00	$5,910,690	1,061,903	$5,702,419
2000 bonus		3,299	3,146	95.4	5.75	$23.00	$416,059	56,785	$303,801
2001 regular	1,916	32,738	31,935	97.5	7.33	$22.00	$5,149,838	734,505	$3,305,273
2001 bonus		3,333	3,213	96.4	5.83	$20.00	$374,636	73,899	$332,546
2002 regular	1,955	31,847	30,487	95.7	7.25	$16.00	$3,536,492	701,201	$3,155,405
2002 bonus		3,280	2,896	88.3	5.83	$16.00	$270,139	66,608	$299,736
2003 regular	1,873	30,533	28,570	93.6	7.17	$13.00	$2,663,010	657,110	$2,956,995
2003 bonus		3,270	3,011	92.1	5.83	$13.00	$228,204	69,253	$311,639
2004 regular	1,859	31,573	30,447	96.4	7.17	$22.50	$4,911,862	700,281	$3,151,265
2004 bonus		3,662	3,476	94.9	5.83	$22.50	$455,964	79,948	$359,766
2005 regular	1,936	32,569	27,623	84.8	7.25	$34.50	$6,909,203	635,329	$2,858,981
2005 bonus		4,008	3,426	85.5	5.83	$34.50	$689,089	78,798	$354,591

* Does not include Salvador WMA harvests from 1972-2003 and Marsh Island experimental, nuisance, and farm harvests from 1972-present.

** The bonus tag program was initiated in 1999 to increase the overall number of wild alligators harvested without putting any additional pressure on the 6' and over portion of the wild population.

*** Sale of meat not permitted; La. Health Department regulations first allowed meat sales in 1979.

**** Bone in from 1979-1984, deboned from 1985-present.

___ Subject to change, numbers updated December 11, 2006.

Table 3. Louisiana Alligator Ranching, 1986-2005

Year	Total Eggs Permitted	Number Collected	Percent Collected	Number Hatched	Alligators Returned to Wild
1986	2,903	2,903	100.0%	1,985	none
1987	19,641	18,041	91.9%	13,782	none
1988	90,305	64,887	71.9%	50,394	1,680
1989	265,051	181,819	68.6%	137,323	7,078
1990	366,055	293,412	80.2%	231,434	6,088
1991	333,451	198,089	59.4%	165,054	44,405
1992	297,125	164,892	55.5%	133,463	35,531
1993	279,405	155,891	55.8%	123,666	28,512
1994	362,835	266,408	73.4%	223,011	21,633
1995	402,830	314,371	78.0%	261,428	20,749
1996	467,545	279,237	59.7%	233,076	40,919
1997	476,115	377,636	79.3%	321,641	48,171
1998	539,216	280,870	52.1%	240,118	36,733
1999	574,731	382,611	66.6%	332,428	44,169
2000	593,625	279,217	47.0%	236,313	39,559
2001	616,465	354,636	57.5%	294,405	48,288
2002	639,145	354,523	55.5%	304,448	32,716
2003	651,207	357,757	54.9%	307,805	50,417
2004	619,730	397,569	64.2%	350,661	47,431
2005	694,694	507,315	73.0%	441,298	35,752
Total	8,292,074	5,232,084	63.1%	4,403,733	589,831

Updated May 18, 2006

Table 4. Farm Alligator Harvest in Louisiana, 1972-2004 *

	No. Farms		No. Skins	Avg T. L.	Skin Value		Meat ***	
Year *	Licensed	Sold Skins	Sold	in Feet	Avg/foot	Total	Amount (lbs)	Value
1972	8	3	35	5	$8.10	$1,418	**	**
1973	8	5	103	6.33	$13.13	$8,561	**	**
1975	8	3	83	5.5	$7.88	$3,597	**	**
1976	8	3	360	5.75	$16.55	$34,259	**	**
1977	8	4	376	5.25	$12.23	$24,142	**	**
1980	8	1	191	4.67	$13.00	$11,596	957	$3,342
1981	8	3	360	4.67	$17.50	$29,421	1,801	$6,300
1982	8	1	113	4	$13.50	$6,102	452	$1,582
1983	14	6	1,449	4.58	$13.00	$86,273	7,253	$25,357
1984	12	7	2,836	4.25	$21.00	$253,113	11,354	$39,704
1985	15	12	4,430	4.25	$21.00	$395,378	17,736	$79,740
1986	22	15	5,925	4.5	$23.00	$613,238	26,687	$119,983
1987	30	23	10,670	4.42	$24.00	$1,131,874	48,060	$216,067
1988	47	38	27,749	4.25	$36.00	$4,245,597	111,094	$554,980
1989	83	68	66,737	3.98	$32.00	$8,499,624	300,877	$1,202,362
1990	123	80	88,424	4.03	$24.00	$8,552,369	397,732	$1,786,059
1991	134	91	118,976	4.13	$15.00	$7,370,563	536,379	$2,380,000
1992	125	85	128,026	4.04	$12.00	$6,206,700	578,289	$2,566,000
1993	101	70	121,700	3.87	$17.00	$8,006,643	388,010	$1,720,000
1994	89	62	136,126	3.67	$20.00	$9,991,648	277,780	$1,197,000
1995	83	50	125,460	3.88	$20.00	$9,735,696	331,395	$1,323,000
1996	81	51	161,845	3.91	$15.50	$9,808,616	511,668	$2,297,900
1997	75	36	169,988	3.74	$16.75	$10,648,898	542,332	$2,435,700
1998	73	38	154,399	3.79	$17.00	$9,947,928	490,990	$2,209,455
1999	64	35	187,570	3.64	$17.00	$11,606,832	552,693	$2,487,119
2000	66	35	219,827	3.81	$20.50	$17,169,588	659,481	$2,967,665
2001	63	32	180,391	3.79	$20.50	$14,015,479	541,173	$2,435,279
2002	62	32	237,808	3.73	$23.50	$20,845,060	713,424	$3,210,408
2003	61	32	277,093	3.81	$24.00	$25,337,384	831,279	$3,740,756
2004	58	31	296,102	3.87	$26.00	$29,793,783	888,306	$3,997,377

* Tag year extends from September of the year designated to the next September (example: 1997 = 9/97 to 8/98).

** Sale of meat not permitted; La. Health Department regulations first allowed meat sales in 1979.

*** Deboned from 1980-present.

___ Subject to change, numbers updated December 11, 2006.

Table 5. Alligator Resource Fund Income, Expenditures, and Balance, 1993-2006

	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Severance		31,787	39,461	39,642	43,792	49,324	48,538
Interest	10,051	13,028	28,696	40,589	55,587	80,441	84,776
Shipping Label Fees	32,688	11,420	63,744	156,588	103,940	107,272	123,120
Tag/collection permit fees	612,456	522,813	634,264	636,221	703,673	792,742	779,566
Misc income				420	500	1,043	350
Total Revenue	655,195	579,048	766,165	873,460	907,492	1,030,822	1,036,350
Less Expenditures	-475,642	-580,437	-578,058	-576,285	-561,308	-619,779	-722,027
Net annual income	**179,553**	**-1,389**	**188,107**	**297,175**	**346,184**	**411,043**	**314,323**
Add balance from prior year		345,393	344,004	532,111	829,286	1,175,470	1,586,513
YEAR-END BALANCE	179,553	344,004	532,111	829,286	1,175,470	1,586,513	1,900,836

	FY 2000	FY 2001	FY 2002	FY 2003 [1]	FY 2004 [1]	FY 2005 [1]	FY 2006
Severance	54,124	62,220	51,744	64,630	66,006	83,732	76,166
Interest	108,758	132,696	84,081	47,379	25,498	38,120	72,961
Shipping Label Fees	187,948	92,763	100,296	100,540	91,232	94,900	69,196
Tag/collection permit fees	869,551	1,011,688	901,710	633,066	529,642	890,116	1,098,394
Misc income	300	400	100				
Total Revenue	1,220,681	1,299,767	1,137,931	845,615	712,378	1,106,868	1,316,717
Less Expenditures	-1,102,752	-930,674	-1,070,743	-1,263,509	-1,076,078	-1,165,338	-1,230,310
Net annual income	**117,929**	**369,093**	**67,188**	**-417,894**	**-363,700**	**-58,470**	**86,407**
Add balance from prior year	1,900,836	2,018,765	2,387,857	2,455,046	2,037,153	1,673,453	1,614,983
YEAR-END BALANCE	2,018,765	2,387,858	2,455,045	2,037,152	1,673,453	1,614,983	1,701,390

[1] Due to the reduction in the alligator hide tag fee, ARF expenditures exceeded ARF income, thereby resulting in a net annual loss of revenue in the ARF.

Table 6. Alligator Management Program Expenditures for Fiscal Years 2005 and 2006

Budget Category	2005	2006
Personal Services	$583,054	$622,653
Travel	$10,920	$9,656
Operating Services	$82,842	$64,214
Supplies	$70,119	$84,334
Professional Services	$10,078	$10,260
Other Charges	$113,420	$108,415
Acquisitions	$28,153	$82,790
Major Repairs	$14,621	-$2,993
Interagency Billings	$16,238	$19,200
Totals	**$929,445**	**$998,529**

EXHIBIT 1. 2005 MARSH ALLIGATOR TAG ALLOTMENT BY PARISH

	Tag Allotment/Marsh Type		
	Brackish	**Intermediate**	**Fresh**
[A]Cameron	1:170	1:85	1:95
Calcasieu	1:250	1:110	1:90
Jeff Davis			1:90
[B]Vermilion West	1:70	1:70	1:125
[B]Vermilion East	1:200	1:200	1:75
Iberia		1:150	1:150
St. Mary		1:75	1:75
Terrebonne	1:150	1:60	1:60
Lafourche	1:175	1:65	1:80
St. Charles	1:100	1:100	1:70
St. John the Baptist		1:75	1:65
Jefferson	1:250	1:70	1:60
Orleans	1:500	1:500	
[C] Plaquemines West	1:300	1:200	1:60
[D]Plaquemines East	1:500	1:110	1:60
Plaquemines Delta	1:225	1:175	1:160
St. Bernard	1:500	1:110	
St. Tammany	1:175	1:100	1:100
Tangipahoa		1:90	1:140

Cypress-Tupelo Swamp	1:190
Dewatered Marsh	1:700
Transitional Marsh[E]	1:500

[A]Marsh between Calcasieu Lake/Calcasieu River and Mermentau River will be issued at the rate of 1 tag:150 acres in intermediate marsh and 1 tag:200 acres in brackish marsh.
[B]The dividing line for Vermilion East and West is the Vermilion River Cutoff (4-mile cut).
[C]Marsh west of Mississippi River.
[D]Marsh east of Mississippi River.
[E]Marsh areas which are characterized by a generally declining alligator population caused by degradation of habitat.

2005 BONUS TAG ISSUANCE

Special experimental Bonus tags for alligators in the less than 6' (<6') size classes will be issued to the hunter, based upon his 2005 regular tag allocation. Bonus tags will be issued according to the following table:

Number of 2005 Regular Tags Allocated	Number of Experimental Bonus Tags to be Issued
1-9	1
10-18	2
19-27	3
28-36	4
37-45	5
46-54	6
55-63	7
64-72	8
73-81	9
82-90	10
91-99	11
100-108	12
109-117	13
118-126	14
127-135	15
136-144	16
145-153	17
Continue in increments of 8 tags	

Special considerations:

1. Bonus harvest should come from less than 6' (<6') size alligators.
2. Bonus alligators must be tagged according to Department regulations with a special experimental Bonus tag (color = blue).
3. Hunter compliance with this experimental program is voluntary; compliance will be monitored through computer analysis of harvest data. Non-compliance may impact allocation of bonus tags for the alligator season in 2006.

2005 NON-MARSH ALLIGATOR TAG ALLOTMENT BY ZONE AND PARISH
LAKE REGION

ZONE	PARISH	HABITAT	ACRES OF HABITAT	TAG ALLOTMENT	REMARKS
Minden	Caddo	Cross Lake	500	10	Public Lake (Experimental Harvest)
SUB TOTAL			**500**	**10**	
Monroe					No Public Lakes No Experimental Harvest
Tioga	Rapides	Cotile	400	10	Public Lake (Experimental Harvest)
	Grant	Nantachie	800	5	Public Lake (Experimental Harvest)
	Grant	Iatt Lake	4,000	10	Public Lake (Experimental Harvest)
SUB TOTAL			**5,200**	**25**	
Ferriday	Concordia	Three Rivers WMA	4,500	45	Experimental Lottery Harvest
		Red River WMA	3,500	35	Experimental Lottery Harvest
		Lake Concordia	800	15	Public Lake (Experimental)
	Tensas	Big Lake WMA	1,000	10	Experimental Lottery Harvest
		Buckhorn WMA	300	5	Experimental Lottery Harvest
		Lake St. Joseph	800	20	Public Lake (Experimental)
		Lake Bruin	2,800	15	Public Lake (Experimental)
		Lake St. John	200	20	Public Lake (Experimental)
	Caldwell	Beouf WMA	2,200	20	Experimental Lottery Harvest
SUB TOTAL			**16,100**	**185**	

2005 NON-MARSH ALLIGATOR TAG ALLOTMENT BY ZONE AND PARISH CONT'D
LAKE REGION

ZONE	PARISH	HABITAT	ACRES OF HABITAT	TAG ALLOTMENT	REMARKS
Lake Charles	Evangeline	Chicot Lake	1,625	16	State Parks (Experimental Harvest)
	Vernon	Anacoco Lake	1,000	5	Public Lake(Experimental Harvest)
SUB TOTAL			**2,625**	**21**	
Opelousas	Avoyelles	Grassy Lake WMA	1,000	25	Highest Bidder Basis
		Spring Bayou	5,000	65	Highest Bidder Basis
		WMA Pomme-de-Terre	800	6	Highest Bidder Basis
	Assumption	Elm Hall WMA	2,843	14	Highest Bidder Basis
	St. Martin	Atchafalaya NWR Bayou des Ourse Brake	1,300	10	Highest Bidder Basis
Opelousas	Iberville	Atchafalaya NWR Bayou des Glaise Brake	2,000	20	Highest Bidder Basis
	Iberville/ St. Martin	Sherburne WMA	11,780	10	Highest Bidder Basis (Basin)
SUB TOTAL			**24,723**	**150**	
LAKE REGION TOTALS			**42,148**	**391**	**Experimental Harvests**

2005 NON-MARSH ALLIGATOR TAG ALLOTMENT BY ZONE AND PARISH
CYPRESS-TUPELO SWAMP REGION

ZONE	PARISH	ACRES OF HABITAT	TAG ALLOTMENT	ACRES/TAG	REMARKS
Opelousas	Iberville	29,880	157	190	Tag allotment based upon review of prior years harvest statistics, night counts and alligator model.
	Lafayette	1,200	6	190	
	Pointe Coupee	1,000	5	190	
	W. Baton Rouge	7,040	37	190	
SUB TOTAL		**39,120**	**205**	**190**	
Baton Rouge	Ascension	40,320	212	190	Tag allotment based upon review of prior years harvest statistics, night counts and alligator model.
	E. Baton Rouge	2,000	11	190	
	Livingston	66,720	351	190	
	Tangipahoa	36,181	190	190	
SUB TOTAL		**145,221**	**764**	**190**	
New Orleans	St. Charles	39,340	207	190	Tag allotment based upon review of prior years harvest statistics, night counts and alligator model.
	St. James	76,960	405	190	
	St. John	104,320	549	190	
SUB TOTAL		**220,620**	**1,161**	**190**	
New Iberia - Bourg	Assumption	98,560	519	190	Tag allotment based upon review of prior years harvests statistics, night counts and alligator model.
	Iberia	31,550	166	190	
	Lafourche	112,350	591	190	
	St. Mary	60,190	317	190	
	Terrebonne	43,014	226	190	
SUB TOTAL		**345,664**	**1,819**	**190**	
SWAMP TOTAL		**750,625**	**3,949**	**190**	

ATCHAFALAYA BASIN ALLIGATOR HABITAT

REGION	ACREAGE	DESCRIPTION
A. Henderson Lake	15,000	Bounded on the west by the West Guide Levee, on the North by Little Fordoche Bayou, on the east by the Haha Bay and Gim Slough and on the south by La. Hwy. 3177.
B. Crook Chen Cove-Buffalo Cove	32,000	Beginning at the northwest corner of Attakapas W.M.A.: A line north along Lake Fausse Point Cut to Bayou Benoit; west to the West Guide Levee, north to the East-West Canal located approximately 3 miles south of Catahoula, La.: East approximately 2 miles to canal; southeast on the same canal to Bayou Crook Chene; east to the main channel of the Atchafalaya River; south to the north boundary of Attakapas W.M.A.; west to point of beginning.
C. Spike Bay-Berry Lake	8,000	Beginning at a point 1-1/2 miles northwest of Bayou Sorrel Landing: west along canal 5 miles; south along Spike Bay for 2 miles; east to intersect Bayou Sorrel then continue east along Bayou Sorrel to East Guide Levee; north to point of beginning.
D. Upper Grand River Flats	12,000	Beginning at Upper Grand River Landing: north along East Guide Levee approximately 9 miles to a canal running northwest; northwest along that canal 2-1/2 miles to King's Ditch; south approximately 5 miles to include Billy Little Lakes; southeast approximately 4 miles to intersection of Upper Grand River and Little Tensas Bayou, east along Upper Grand River to point of beginning.
E. Bayou Pigeon-Belle River-Flat Lake	140,000	Beginning at Bayou Pigeon Landing; south along East Guide Levee to Morgan City (excluding Flat Lake); north-northwest along east side of the main channel of Six Mile Lake approximately 10 miles to 21-Inch Canal; northeast on 21-Inch Canal to Bayou Boutte; north on Bayou Boutte to the east boundary line of Attakapas W.M.A.; then north along its east boundary to Grand Lake; north along the east bank of Grand Lake to Keelboat Pass; northeast along Keelboat Pass and Flat Lake Pass to intersection of Williams Canal and a canal running southwest-northeast; northeast along that canal to intersection of Intracoastal Canal (East Guide Levee); south to Bayou Pigeon Landing.
TOTAL ALLIGATOR HABITAT WITHIN BASIN TYPE	207,000	Tags may be issued at the rate of one tag per 500 acres of habitat.

2005 NON-MARSH ALLIGATOR TAG ALLOTMENT BY REGIONS

REGION	ACRES OF HABITAT	ALLOTMENT	ACRES/TAG	REMARKS
Lakes	42,148	391	100*	Includes public lakes as well as private Cypress-Lake habitat. *Tag allotment may vary depending on alligator populations.
Cypress-Tupelo Swamp	750,625	3,949	190	Swamp habitat outside the Atchafalaya Basin.
Atchafalaya Basin	207,000	414	500	That portion of the Atchafalaya Basin determined to be Cypress-Tupelo swamp containing permanent water as determine by aerial observations as well as approximately 400 miles of travel by boat during April-June, 1985.
GRAND TOTAL	**999,773**	4,754		

*Additionally: Any private lake region or coastal marsh alligator habitat determined by Department personnel to have a reproducing population may be issued tags at the rate of one tag per 100 acres of habitat; exceptionally dense alligator populations on a localized area may be issued tags at the rate of 1 tag per 50 acres of habitat (requires coordination and annual evaluation with Fur and Refuge Division personnel).

Approved by:

Dwight Landreneau, Secretary
La. Dept. of Wildlife and Fisheries

7/18/05
DATE

EXHIBIT 2. LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, OFFICE OF WILDLIFE, FUR AND REFUGE DIVISION ALLIGATOR STAFF

CONTACT/TITLE	SPECIALTY
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EXHIBIT 2. LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, OFFICE OF WILDLIFE, FUR AND REFUGE DIVISION ALLIGATOR STAFF

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